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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/528,058

03/15/2005

Wilhelm Scherze

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06/23/2008

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EXAMINER

HOBBS, MICHAEL L

ART UNIT

PAPER NUMBER

1797

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PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary	Application No. 10/528,058	Applicant(s) SCHERZE ET AL.	
	Examiner MICHAEL HOBBS	Art Unit 1797	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12 May 2008.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>05/12/2008</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

1. Applicant's amendment from 05/12/2008 has been considered and entered for the record. Applicant's amendment overcomes the 35 USC 112 2nd paragraph rejection for claim 1 and the rejection is withdrawn. Claims 1-11 are pending for further examination on the merits.

Response to Arguments

2. Applicant's arguments, see page 3 paragraph 4 and page 8 paragraph 1, filed 05/12/2008, with respect to the rejection(s) of claim(s) 1-4, 6-8 and 11 under 102(b) have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of Minuth (US 5,665,599) which discloses a multi-part chamber for use with a microscope for observing long-term cell cultures.

3. Also, Shanks teaches the use of sapphire glass for the optical windows for a microscope slide. Furthermore, Shanks also teaches that the material used for the optical windows depending on the wavelength of the light and the angle of reflection from the light source to the optical window. Loeffler teaches a heating element for use with a microscope slide.

Claim Rejections - 35 USC § 102

4. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

5. Claims 1-4 and 6-8 are rejected under 35 U.S.C. 102(b) as being anticipated by Minuth (US 5,665,599).

6. For claim 1, Minuth discloses a chamber for cultivating cells that includes a cell carrier (17) or membrane plate that divides the chamber into two portions. Also, the chamber includes conduits (21, 22) for delivering nutrient media to the cells and a sensor (23) is placed within the cell chamber. Furthermore, the chamber includes a glass plate(13) which is located on one side of the cell carrier plate and above the microscope objective (14). On the other side of the cell carrier plate is another thin disk (13a) which covers the aperture and is also made out of glass (col. 3 lines 39-40).

While not specifically teaching that a light source is on the other side of the device, it is inherent within the teachings of that a light source would be opposite of the microscope objective in order to illuminate the cells on the carrier plate.

7. With regard to claim 2, that the glass plate is positioned on the underside of the carrier plate (Fig. 2). Also, for claim 3, a holding seal (19a) or cap is placed on top of the glass plate that can be connected the slide by screws or a vacuum which allows the seal to be removed (col. 3 lines 61-64). For claim 4, the aperture of the plate has a edge or ledge (12a", 12") that serves as an opening or setting for the glass plates (col. 2 lines 36-38).

8. For claim 6, the carrier plate (17) is connected to a ring (16) that is held in place by sealing ring (15, 15a) or retaining ring for holding the carrier plate (col. 2 lines 46-49). Regarding claim 7, Minuth teaches that a seal (18,18a) is placed on top of the glass plate (13a) and this seal is fully capable of aseptically sealing the chamber. With

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regards to claim 8, Minuth also includes conduits (22) that make it possible to feed or drain liquid or gaseous media from the chamber (col. 3 lines 16-22). These conduits are fully capable of continuously feeding gas or liquid media to the chamber.

9. Therefore, Minuth meets the limitations of claims 1-4 and 6-8.

Claim Rejections - 35 USC § 103

10. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

11. Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minuth (US 5,665,599) in view of Shanks (US 4,810,658).

12. Minuth teaches using glass plates, but does not mention using sapphire glass.

13. Shanks discloses a photometric instrument that is used for optical analysis of samples on a microscope slide. Furthermore, for claim 5, Shanks discloses a slide that is made of glass, silica, inorganic crystal (e.g. sapphire) or a plastic material (col. 3 lines 35-38). Therefore, it would have been obvious to one of ordinary skill in the art to employ the sapphire slide as suggested by Shanks within the teachings of Minuth to allow light to pass through the sample for optical testing. The suggestion for doing so at the time would have been in order to allow light from the liquid sample to emerge at different angles off-axis from the slide for the optical testing (Abstract).

14. Claims 9 and 10 are rejected under 35 U.S.C. 103(a) as being unpatentable over Minuth (US 5,665,599) in view of Loeffler et al. (U.S. 6,673,620).

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15. For claim 9, Minuth teaches that the chamber or interior can be heated (col. 3 lines 54-59), but does not teach that the heater is integrated or electrical.

16. Loeffler teaches an in situ hybridization (ISH) cell that is used to observe fluid exchange on a microscope slide. For claim 9, Loeffler discloses that a heater plate is underneath the microscope slide (Fig. 1 elements 7 & 9) that can be used to heat the sample on the slide (col. 6 lines 5-8). The heater plate protects the heating element from any spillage of the liquid from the slide (col. 6 lines 11-12) and with the heat transfer into the fluid observation system being through the heating plate (col. 6 lines 13-14), thus the heating plate is integrated into the microscope slide. For claim 10, the heater plate of Loeffler is connected to a resistive heating (where resistive heating is being interpreted to be electrical heating) element (col. 6 line 10) that facilitates even heat transfer across the plate. At the time of the invention, it would have been obvious to one of ordinary skill in the art to employ the heater plate and heating element as suggested by Loeffler within the teachings of Minuth in order to heat the sample within the chamber. The suggestion for doing so at the time would have been in order to stabilize the temperature around a desired mean temperature (col. 6 lines 16-17).

17. Claim 11 is rejected under 35 U.S.C. 103(a) as being unpatentable over Minuth (US 5,665,599) in view of McGarry et al. (US 2003/0190744).

18. Minuth teaches that a cell carrier is within the chamber, but does not mention a biofoil.

19. McGarry teaches an apparatus for performing biological reactions on a substrate surface such as a microscope slide. For claim 11, McGarry teaches a gas permeable layer such as a biocompatible membrane ([0051]) which is being interpreted to be a biofoil. Such biocompatible membranes are used where gas transfer is needed between two compartments within a culture chamber and to provide a substrate for the attachment of cells. The use of a membrane as substrate for anchorage dependent cells is known within the art. Furthermore, it would be obvious to one of ordinary skill in the art to employ the membrane as suggested by McGarry in order to provide a gas permeable substrate for the cells of Minuth. The suggestion for doing so at the time would have been to provide a biocompatible substrate for the attachment of anchorage-dependent cells.

Conclusion

20. Claims 1-11 are rejected.

21. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the

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shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to MICHAEL HOBBS whose telephone number is (571)270-3724. The examiner can normally be reached on Monday-Thursday 7:30 AM - 5:00 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Jill Warden can be reached on (571) 272-1267. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/William H. Beisner/
Primary Examiner, Art Unit 1797

MLH